

In re application: **Dario B. Crosetto**

Serial No.: **NEW**

Filed: **November 25, 2003**

For: **METHOD AND APPARATUS
FOR DETERMINING DEPTH OF
INTERACTION FOR 3-DIMENSIONAL
COMPLETE BODY SCREENING**

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Group Art Unit: **Unassigned**

Examiner: **Unassigned**

Attorney Docket No.: **510974-600011**

Mail Stop Patent Application
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to the guidelines for Information Disclosure Statements set forth in 37 C.F.R. §§ 1.97-1.98 and MPEP § 609, Applicant submits herewith patents, publications, or other information of which he is aware, which he believes may be material to the examination of this application and in respect of which there may be a duty of disclosure in accordance with 37 C.F.R. 1.56.

A list of patent(s) and/or publications(s) is set forth on the attached Form PTO/SB/08A. A copy of each foreign application and non-patent literature is enclosed.

It is submitted that these references do not disclose, teach, or suggest the present invention and thus the claims herein are patently distinct therefrom.

While this Information Disclosure Statement may be "material" pursuant to 37 C.F.R. 1.56, it is not intended to constitute an admission that any patent, publication, or other information referred to therein is "prior art" for this invention unless specifically designated as such.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.10

I hereby certify that this correspondence, paper and/or fee is being deposited with the United States Postal Service as "Express Mail to Addressee Service" under 37 C.F.R. 1.10 in an envelope addressed to: MS Patent Application, Commissioner for Patents, P. O. Box 1450, Alexandria, VA, 22313-1450.

on **N vember 25, 2003**

by

Marsha S. Kappus
Marsha S. Kappus

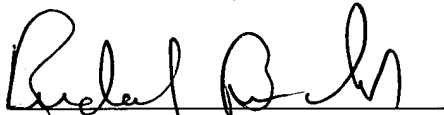
In accordance with 37 C.F.R. 1.97(b) the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. 1.56(a) exists.

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office Action on the merits, whichever event occurs last. 37 C.F.R. 1.97(b).

Any fees required for the proper filing of this Information Disclosure Statement should be withdrawn from the Jones Day Deposit Account No. 50-0566.

The person making this statement is the practitioner who signs below.

Respectfully submitted,



Rudolph J. Buchel, Jr., No. 43,448 *

Date: November 25, 2003

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ATTORNEY FOR APPLICANT

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Applicant Number		NEW
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				Examiner Name		Unassigned
Sheet	1	of	2	Attorney Docket Number		510974-600011

U.S. PATENT DOCUMENTS					
		Document Number			
Examiner Initials*	Cite No. ¹	Number – Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-4,559,597	Dec. 17, 1985	Mullani	
	AB	US-4,563,582	Jan. 7, 1986	Mullani	
	AC	US-4,642,464	Feb. 10, 1987	Mullani	
	AD	US-4,677,299	June 30, 1987	Wong	
	AE	US-755,697	July 5, 1988	Wong	
	AF	US-4,864,138	Sep. 5, 1989	Mullani	
	AG	US-4,883,966	Nov. 28, 1989	Wong	
	AH	US-5,210,420	May 11, 1993	Hartz et al.	
	AI	US-5,241,181	Aug. 31, 1993	Mertens et al.	
	AJ	US-5,272,344	Dec. 21, 1993	Williams	
	AK	US-5,300,782	Apr. 5, 1994	Johnson et al.	
	AL	US-5,430,229	July 4, 1995	Voss	
	AM	US-5,453,623	Sep. 26, 1995	Wong et al.	
	AN	US-5,602,395	Feb. 11, 1997	Nellemann et al.	
	AO	US-5,608,221	Mar. 4, 1997	Bertelson et al.	
	AP	US-5,703,369	Dec. 30, 1997	Mori	
	AQ	US-5,753,917	May 19, 1998	Engdahl	
	AR	US-5,757,006	May 26, 1998	DeVito et al.	
	AS	US-5,760,401	June 2, 1998	Nellemann et al.	
	AT	US-5,841,140	Nov. 24, 1998	McCroskey et al.	
	AU	US-5,847,396	Dec. 8, 1998	Lingren et al.	
	AV	US-5,969,358	Oct. 19, 1999	DiFilippo et al.	
	AW	US-5,986,266	Nov. 16, 1999	Andreaco et al.	
	AX	US-5,998,793	Dec. 7, 1999	Shao et al.	
	AY	US-6,008,493	Dec. 28, 1999	Shao et al.	

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	AZ	US-6,140,650	Oct. 31, 2000	Berlad	
	ABA	US-60/204,900	May 16, 2000	Crosetto	
	ABB	US-60/215,667	June 30, 2000	Crosetto	
	ABC	US-60/250,615	Nov. 30, 2000	Crosetto	
	ABD	US-60/258,204	Dec. 20, 2000	Crosetto	
	ABE	US-60/261,387	Jan. 15, 2001	Crosetto	
	ABF	US-60/309,018	July 31, 2001	Crosetto	
	ABG	US-60/424,933	Nov. 9, 2002	Crosetto	
	ABH	US-5,907,593	May 25, 1999	Hsieh et al.	
	AGI	US-5,937,202	Aug. 10, 1999	Crosetto	
	AGJ	US-5,949,842	Sep. 7, 1999	Schafer et al.	
	AGK	US-6,035,013	Mar. 7, 2000	Orava et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ – Number ⁴ – Kind Code ⁵ (if known)				
	BA	CA 2,252,993		May 6, 2000	Saoudi et al.	
	BB	CA 1245375		Nov. 22, 1988	Lecomte	

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	CA	KARP, Joel S. et al., "Performance Standards in Positron Emission Tomography," Journal of Nuclear Medicine, Dec. 1991, pp. 2342-2350, Vol. 12, No. 32.	
	CB	WATSON, C.C. et al., "Design and Performance of a Single Photo Transmission Measurement for the ECAT ART," Siemens ECAT ART.	
	CC	SEIDEL, J. et al., "Experimental Estimates of the Absolute Sensitivity of a Small Animal PET Scanner with Depth-of-Interaction Capability," IEEE 2000-777.	
	CD	Technical Data, "Nuclear Medicine/PET, Discovery VI," GE Medical Systems, Feb. 2002.	
	CE	"Advance NXi, Whole-Body Positron Emission Tomography System S9110NF/S9110NM," GE Medical Systems, 2000.	
	CF	JOHNSTON, Brian D. et al., "Automated Data Acquisition and Analysis for Evaluation of PET Detector Units," General Electric Systems, pp. 873-875, Milwaukee, WI.	
	CG	LEWELLEN, T.K. et al., "Investigation of the Performance of the General Electric ADVANCE Positron Emission Tomograph in 3D Mode," IEEE Transactions on Nuclear Medicine, Aug. 1996, pp. 2199-2206, Vol. 43, No. 4.	
	CH	LEWELLEN, T.K. et al., "Investigation of the Count Rate Performance of General Electric Advance Positron Emission Tomograph," IEEE Transactions on Nuclear Science, Aug. 1995, pp. 1051-1057.	
	CI	SMITH, R.J. et al., "A Practical Method for Randoms Subtraction in Volume Imaging PET from Detector Singles Count Rate Measurements," University of PA, Dept. of Radiology, 1996, pp. 992-996, Philadelphia, PA.	
	CJ	CUTLER, P. Duffy et al., "An Approximate Method for Acquisition and Reconstruction of Volumetric PET Data," IEEE, 1994, pp. 1209-1211.	
	CK	SMITH, Robin J. et al., "The Count Rate Performance of the Volume Imaging PENN-PET Scanner," IEEE Transactions on Medical Imaging, Dec. 1994, pp. 610-618, Vol. 13, No. 4.	
	CL	MOISAN, c. ET AL., "A Count Rate Model for PET and Its Applications to an LSO HR PLUS Scanner," IEEE 1997, pp. 1186-1190.	
	CM	BUDINGER, Thomas F., "PET Instrumentation: What are the Limits?" Seminars in Nuclear Medicine, July 1998, pp. 247-267, Vol. XXVIII, No. 3.	
	CN	WEAR, James A., "A Model of the High Count Rate Performance of NaI (TI)-Based PET Detectors," IEEE, 1998, pp. 1203-1207.	
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Dario B. Crosetto				
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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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	CO	SMITH, R.J. et al., "Methods to Optimize Whole Body Surveys with C-PET Camera," IEEE, 2000.	
	CP	KOPS, Elena Rota et al., "Performance Characteristics of an Eight-Ring Whole Body PET Scanner," Journal of Computer Assisted Tomography, 1990, pp. 437-445, Vol. 14, No. 3.	
	CP	CHERRY, Simon R., "Recent advances in instrumentation for positron emission tomography," Nuclear Instruments & Methods in Physics Research, 1994, pp. 577-582.	
	CQ	PAANS, A.M.J., "The Imaging of Positron Emitters in Single Photon and Coincidence Mode: Evaluation of SPECT and PET Systems," 18 th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Amsterdam, 1996, 3.6.2.: PET and SPECT Imaging.	
	CR	KARP, J.S., et al., "Performance Measurements for the GSO-based Brain PET Camera (G-PET)," University of PA, Dept. of Radiology.	
	CS	BANDETTINI, A. et al., "An electronic coincidence triggering system for 'in-frame' DAQ from a double side μ -strip silicon detector exposed to X-rays," IEEE, 1993, pp. 517-519.	
	CT	MANKOFF, D.A. et al., "A local coincidence triggering system for PET tomographs composed of large-area positron-sensitive detectors," IEEE Transactions on Nuclear Science, Apr. 1990, pp. 730-736, Vol. 37, No. 2.	
	CU	DENT, H.M. et al., "A real time digital coincidence processor for positron emission tomography," IEEE Transactions on Nuclear Science, Feb. 1986, pp. 556-559-Vol. 33, No. 1.	
	CV	MERTENS, J.D. et al., "Digital Coincidence Detection: A Scanning VLSI Implementation," IEEE Transactions on Nuclear Science, Dec. 1993, Vol. 40.	
	CW	KARP, J.S. et al., "Event localization in a continuous scintillation detector using digital processing," IEEE Transactions on Nuclear Science, Feb. 1986, pp. 550-555, Vol. 33, No. 1.	
	CX	FREIFELDER, Richard, "Design and Performance of the HEAD PENN-PET Scanner," IEEE Transactions on Nuclear Science, Aug. 1994, pp. 1436-1440, Vol. 41, No. 4.	
	CY	KARP, J.S. et al., "Factors Affecting Accuracy and Precision in PET Volume Imaging," Journal of Cerebral Blood Flow and Metabolism, 1991, pp. A38-A-44, Vol. 11.	
	CZ	KARP, Joel S., "Effect of Increased Axial Field of View on the Performance of a Volume PET Scanner," Nuclear Science Symposium and Med. Imaging Conference, 1991, Conference Record of the 1991 IEEE, 1991, pp. 1574-1578, Vol. 3.	
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	CAA	KARP, J.S. et al., "Evaluation of Volume Imaging with the HEAD PENN-PET Scanner," University of PA, Department of Radiology, 1995, IEEE, 1995, pp. 1877-1881.	
	CAB	KARP, Joel S. et al., "Three-Dimensional Imaging Characteristics of the HEAD PENN-PET Scanner," Journal of Nuclear Medicine, Apr. 1997, pp. 636-643, Vol. 38, No. 4.	
	CAC	Technical Data, ECAT® ACCEL Tomograph.	
	CAD	Saoudi, A. et al., "Investigation of Depth-of-Interaction by Pulse Shape Discrimination in Multicrystal Detectors Read Out by Avalanche Photodiodes," NSS Conference, 1998 IEEE, 1998, pp. 1078-1082, Vol. 2.	
	CAE	FREIFELDER, R. et al., "Data acquisition with a positron emission tomograph," http://www.lecroy.com/lrs/EPP/freif.htm .	
	CAF	NEWPORT, D.F. et al., "An ASIC Implementation of Digital Front-End Electronics for a High Resolution PET Scanner," IEEE Transactions on Nuclear Science, Aug. 1993, pp. 1017-1019, Vol. 40, No. 4.	
	CAG	PAULUS, Michael J. et al., "A Low-Noise, Wide-Band CMOS Charge-sensitive Preamplifier for use with APD/LSO PET Detectors," IEEE Transactions on Nuclear Science, June 1996, pp. 1666-1671, Vol. 43, No. 3.	
	CAH	SHAO, Yiping, "A Study of Depth of Interaction Measurement Using Bent Optical Fibers," Crump Institute of Biological Imaging, Dept. of Molecular and Medical Pharmacology, UCLA School of Medicine, 1999, pp. 1440-1444.	
	CAI	DERENZO, S.E., "Initial Characterization of a Positron-Sensitive Photodiode/BGO Detector for PET," IEEE Transactions for Nuclear Science, Feb. 1989, pp. 1084-1089, Vol. 36, No. 1.	
	CAJ	HUBER, J.S., "Calibration of a PET Detector Module that Measures Depth of Interaction," IEEE Transactions on Nuclear Science, June 1998, pp. 1268-1272, Vol. 45, No. 3.	
	CAK	YAMAMOTO, S., "A GSO depth of interaction detector for PET," IEEE Transactions on Nuclear Science, June 1998, pp. 1078-1082, Vol. 45, No. 3.	
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	CAL	YOUNG, J.W. et al., "Optimum Bandwidth Usage in Digital Coincidence Detection for PET," CTI PET Systems, Inc., 1994, pp. 1205-1208.	
	CAM	MUEHLLEHNER, G. et al., "A hexagonal bar positron camera: problems and solutions," IEEE Transactions on Nuclear Science, Feb. 1983, pp. 652-659, Vol. NS-30, No. 1.	
	CAN	JONES, W.F. et al., "Next Generation PET Data Acquisition Architectures," NSS 95 Conference Record, 1997, pp. 1202-1207, Vol. 44, No. 3.	
	CAO	BINKLEY, David M. et al., "A Custom CMOS Integrated Circuit for PET Tomograph Front-End Applications," IEEE, 1994, pp. 867-871.	
	CAP	CUTLER, P. Duffy et al., "Use of Digital Front-End Electronics for Optimization of a Modular PET Detector," IEEE Transactions on Medical Imaging, June 1994, pp. 408-418, Vol. 13, No. 2.	
	CAQ	YOUNG, John W. et al., "FPGA Based Front-End Electronics for a High Resolution PET Scanner," CTI PET Systems, Inc.	
	CAR	YU, Haiming et al., "A High-Speed and High-Precision Winner-Select-Output (WSO) ASIC, pp. 656-660, University of Washington Medical Center, Seattle, WA.	
	CAS	STENSTROM, P. et al., "Evaluation of a Data Acquisition System for SPECT (PET)," IEEE, 2000.	
	CAT	RAMSDEN, Z. He et al., "Two Data Acquisition And Processing Systems For A Compact Gamma-Camera, IEEE Transactions on Nuclear Science, Aug. 1993, pp. 1165-1168, Vol. 40, No. 4.	
	CAU	CHERRY, Simon R. et al., "Optical Fiber Readout of Scintillator Arrays using a Multi-Channel PMT: A High Resolution PET Detector for Animal Imaging," IEEE Transactions on Nuclear Science, June 1996, pp. 1932-1937, Vol. 43, No. 3.	
	CAV	LEWELLEN, T.K. et al., "An XYE Acquisition Interface for General Electric Starcam Anger Cameras," University of Washington, Seattle, Washington, pp. 1861-1865.	
	CAW	LEWELLEN, T.K. et al., "A Data Acquisition System for Coincidence Imaging Using a Conventional Dual Head Gamma Camera," IEEE, 1997, pp. 1305-1309.	
	CAX	BINKLEY, David M. et al., "An Electronic Detector Simulator for Testing Positron, Energy, and Timing Spectral Performance of Detector Electronics," CTI PET Systems, Inc., No Date.	
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	CBY	LI, HONG DI et al., "Electronics for a Prototype Variable Field of View PET Camera Using the PMT-Quadrant-Sharing Detector Array," IEEE, 1999, pp. 1227-1231.	-
	CBZ	BINKLEY, David M. et al., "A Monolithic 2 μ m CMOS Constant-Fraction Discriminator for Moderate Time Resolution Systems," IEEE Transactions on Nuclear Science, Dec. 1991, pp. 1754-1759, Vol. 38, No. 6.	
	CCA	HUBER, J.S. et al., "Characterization of a 64 Channel PET Detector Using Photodiodes for Crystal Identification," IEEE Transactions on Nuclear Science, June 1997, pp. 1197-1201, Vol. 44, No. 3.	
	CCB	SIEGEL, Stefan et al., "Development of Continuous Detectors for a High Resolution Animal PET System," IEEE Conference Record, 1994, pp. 1662-1666.	
	CCC	HUBER, J.S. et al., "Conceptual Design of a High-Sensitivity Small Animal PET Camera with 4 π Coverage," IEEE Transactions on Nuclear Science, June 1999, pp. 498-502, Vol. 46, No. 3.	
	CCD	MOSES, W.W. et al., "Performance of a PET Detector Module Utilizing an Array of Silicon Photodiodes to Identify the Crystal of Interaction," IEEE Transactions on Nuclear Science, Aug. 1993, pp. 1036-1040, Vol. 40, No. 4.	
	CCE	GRUBER, G.J. et al., "A Discrete Scintillation Camera Module Using Silicon Photodiode Readout of CsI(Tl) Crystals for Breast Cancer Imaging," IEEE Transactions on Nuclear Science, June 1998, pp. 1063-1068, Vol. 45, No. 3.	
	CCF	HUBER, J.S., "A LSO Scintillator Array for a PET Detector Module with depth of Interaction Measurement," IEEE, pp. 14-46 - 14-50.	
	CCG	CORREIA, J.A. et al., "Performance of Small Animal PET Instrument with 1mm Resolution," IEEE, 2000.	
	CCH	McINTYRE, "A Positron Emission Tomograph Designed for 3/4 mm Resolution," IEEE, 1995, pp. 1357-1361.	
	CCI	DAHLBOM, Magnus et al., "Design Study of Future 3-D PET Systems," IEEE, 1995, pp. 1667-1671.	
	CCJ	CASEY, M.E. et al., "Investigation of LSO Crystals for High Spatial Resolution Positron Emission Tomography," IEEE Transactions on Nuclear Science, June 1997, pp. 1109-1113, Vol. 44, No. 3.	
	CCK	ROGERS, Joel G. et al., "Testing 144- and 256-crystal BGO Block Detectors," IEEE, NSS MIC Conference Record 1993, pp. 183701841, Vol. 3.	
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	CCL	MOISAN, C. et al., "Simulating the Performances of an LSO Based Position Encoding Detector for PET," IEEE, 1997, pp. 1211-1215.	
	CCM	FICKE, D.C. et al., "A GSO(Ce) Block Type Detector for High Count Rate PET Applications," IEEE, 1995, pp. 1859-1863.	
	CCN	SAOUDI, A. et al., "A Novel APD-Based Detector Module for Multi-Modality PET/SPECT/CT Scanners," IEEE, 1999, pp. 1089-1093.	
	CCO	LECOMTE, R. et al., "An APD-based Quad Scintillator Detector Module with Pulse Shape Discrimination Coding for PET," IEEE, 1999, pp. 1445-1447.	
	CCP	LECOMTE, R. et al., "Investigation of GSO, LSO and YSO Scintillators using Reverse Avalanche Photodiodes," IEEE, 1998, 212-216.	
	CCQ	ROGERS, J.G. et al., "An Improved Multicrystal 2-D BGO Detector for PET," IEEE Transactions on Nuclear Science, 1992, pp. 1063-1068, Vol. 39, No. 4	
	CCR	MOSES, William W. et al., "PET detector modules based on novel detector technologies," Nuclear Instruments and Methods in Physics Research A 353, 1994, pp. 189-194.	
	CCS	DEL GUERRA, A. et al., "YAP-PET: a small animal Positron Emission Tomograph based on YAP:Ce finger crystals. No date.	
	CCT	VITTORI, F. et al., "The YAP Camera: An accurate Gamma Camera Particularly Suitable for New Radiopharmaceuticals Research," IEEE Transactions on Nuclear Science, Feb. 1997, pp. 47-53, Vol. 44, No. 1.	
	CCU	ROGERS, Joel G. et al., "A Practical Block Detector for a Depth Encoding PET Camera," 1996, pp. 1637-1641.	
	CCV	CHERRY, Simon R. et al., "A Comparison of PET Detector Modules Employing Rectangular and Round Photomultiplier Tubes," IEEE Transactions on Nuclear Science, Aug. 1995, pp. 1064-1068, Vol. 42, No. 4.	
	CCW	WIENHARD, Klaus et al., "Performance Evaluation of the Positron Scanner ECAT EXACT," Journal of Computer Assisted Tomography, Sep./Oct. 1992, pp. 804-813, Vol. 16, No. 5.	
	CCX	SPINKS, T.J. et al., "Performance of a new 3D-only PET scanner - the EXACT3D," IEEE 1997, pp. 1275-1279.	
Examiner Signature		Date Considered	

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Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	NEW
		Filing Date	November 25, 2003
		First Named Inventor	Dario B. Crosetto
		Art Unit	Unassigned
		Examiner Name	Unassigned
		Attorney Docket Number	510074-600011
Sheet	7	of	8

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	CCY	SPINKS, T.J. et al., "Physical characteristics of the ECAT EXACT3D positron tomograph," Phys. Med. Biol., 2000, pp. 2601-2018.	-
	CCZ	WIENHARD K. et al., "The ECAT HRRT: Performance and First Clinical Application of the New High Resolution Research Tomograph," No Date.	
	CDA	DAHLBOM, M. et al., "Performance of a YSO/LSO Phoswich Detector for use in a PET/SPECT System," IEEE Transactions on Nuclear Science, June 1997, pp. 1114-1120, Vol. 44, No. 3.	
	CDB	CHERRY, S.R. et al., "MicroPET: A High Resolution PET Scanner for Imaging Small Animals," IEEE Transactions on Nuclear Science, June 1997, Vol. 44, No. 3.	
	CDC	DALBOM, M. et al., "Whole-Body Positron Emission Tomography: Part I. Methods and Performance Characteristics," Journal of Nuclear Medicine, June 1992, pp. 1191-1199, Vol. 33, No. 6.	
	CDD	MORENO-CANTU, J.J. et al., "Evaluation of the ECAT EXACT HR + 3D PET Scanner in ¹⁵ O-water Brain Activation Studies," IEEE, 1997, pp. 1280-1284.	
	CDE	DAHLBOM, Magnus et al., "Methods for Improving Image Quality in Whole Body PET Scanning," IEEE Conference Record 1991, pp. 1587-1382.	
	CDF	BRUCKBAUER, T. et al., "Evaluation of the ECAT EXCAT HR with ACSII for Clinical Routine 3D Measurements," 1996, pp. 1378-1382.	
	CDG	MORENO-CANTU, J.J. et al., "Evaluation of the ECAT EXACT HR + 3D PET Scanner in ¹⁵ O-water Brain Activation Studies: Dose Fractionation Strategies for rCBF and Signal Enhancing Protocols," IEEE Transactions on Medical Imaging, Dec. 1998, pp. 979-985, Vol. 17, No. 6.	
	CDH	SHAO, Yiping et al., "Evaluation of Multi-Channel PMT's for Readout of Scintillator Arrays," 1996, pp. 1055, 1059.	
	CDI	SCHMAND, M. et al., "Performance Evaluation of a New LSO High Resolution Research Tomography - HRRT," No Date.	
	CDJ	BRIX, Gunnar et al., "Performance Evaluation of a Whole-Body PET Scanner Using the NEMA Protocol," Journal of Nuclear Medicine, Oct. 1997, pp. 1614-1623.	
	CDK	CROSETTO, Dario B., "A modular VME or IBM PC based data acquisition for multi-modality PET/CT scanners of difference sizes and detector types," Presented at the IEEE Nuclear Science Symposium and Medical Imaging Conference, Lyon, France, 2000, pp. 1-20.	
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	CDL	CROSETTO, Dario B., "Real-time, programmable, digital signal-processing electronics for extracting the information from a detector module for multi-modality PET/SPECT/CT scanners," Presented at the IEEE Nuclear Science Symposium and Medical Imaging Conference, Lyon, France, 2000, pp. 1-8.	
	CDM	CROSETTO, Dario B., "Saving lives through early cancer detection: Breaking the current PET efficiency barrier with the 3D-CBS," Presented on May 16, 2001 at the University of Geneva, Switzerland.	
	CDN	CROSETTO, Dario B., "400+ times improved PET efficiency for lower-dose radiation, lower-cost cancer screening," 2000, pp. 1-200.	
	CDO	Wienhard, Klaus et al., "The ECAT EXACT HR: Performance of a New High Resolution Positron Scanner," Journal of Computer Assisted Tomography, pp. 110-118; January/February 1994.	
	CDP	DeGrado, Timothy R. et al., "Performance Characteristics of a Whole-Body PET Scanner," The Journal of Nuclear Medicine, August 1994, pp. 1398-1406, Vol. 35, No. 8.	
	CDQ	Smith, Wesley et al., "Calorimeter Trigger," Technical Overview, DoE/NSF Review, pp. 1-29; http://www.hep.wisc.edu/wsmith/cms/Lehman98_Cal.pdf , May 1998.	
	CDR	Beigbeder, Christopher et al., "An Update of the 2x2 Implementation for the Level 1 Calorimeter Triggers," LHCb 99-007, pp. 1-15, 29 April 1999.	
	CDS	Eisenhandler, Eric, "Hardware Triggers at the LHC," pp. 47-56.	
	CDT	Lackey, J. et al., "CMS Calorimeter Level 1 Regional Trigger - Conceptual Design," CMS Note 1998/074, November 13, 1998.	
	CDU	Crosetto, Dario B., "Detailed Design of the Digital Electronics Interfacing Detectors, First-Level Triggers, and Higher Levels of Trigger with Flexible Configuration Parameters," LHCb 99-006, TRIG, 30 March 1999.	
	CDV	Technical Data, "biograph - The Imager for Life," Siemens Medical Systems, Inc., Journal of Nuclear Medicine, May 2001, article 369, p. 998.	
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